

# Nutrition Foundations

## For Alaska School Meals



### A Nutrition Guide for the National School Lunch Program and School Breakfast Program

Alaska Department of Education & Early Development  
Child Nutrition Programs

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# Introduction

Children's food choices and eating habits are shaped by many sources, but one of the significant influences is the school they attend. The school environment plays a large role in teaching and modeling eating and health behaviors. For many children, foods consumed at school provide a major portion of their daily nutrient intake.

*Schools have a responsibility to model and reinforce healthy eating habits by teaching and modeling appropriate health behaviors.*

As a result of the 2010 Healthy, Hunger Free Kids Act, USDA has revised the school meal patterns and nutrition requirements for Child Nutrition Programs based on recommendations from the 2010 Dietary Guidelines for Americans. Alaska Child Nutrition Programs developed this Guidebook to School Nutrition in support of the USDA regulations and as part of a USDA Team Nutrition grant.

Nutrition Foundations for Alaska School Meals was developed to support healthier foods offered in schools and residential child care institutions. This nutrition information will help every school instill healthy eating habits in students by reducing sugar, sodium, and high-fat foods and increasing healthy food items like whole grains and fruits and vegetables.

Federally reimbursable meals provided through the School Breakfast Program (SBP) and the National School Lunch Program (NSLP) should meet all current Federal meal requirements.

Nutrition Foundations for Alaska School Meals is conducive to regulatory requirements found in 7 CFR Parts 210 and 220.

# Improving Nutrient Content

Adequate nutrients play an important role in student wellness, growth and learning. Certain foods have higher levels of key nutrients and including these foods as a part of school meals will improve the nutritional health of your students.

**Calcium** (strong bones and teeth)  
low fat or nonfat milk, cheese and yogurt

**Vitamin A** (healthy eyes and smooth skin) broccoli, cantaloupe, carrots, greens, romaine lettuce, spinach and sweet potatoes

**Vitamin C** (healthy skin, blood vessels and immune system)  
oranges, peaches, peppers, strawberries, broccoli

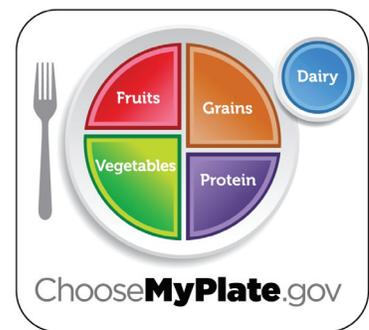
**Iron** (red blood cells to carry oxygen to the body) beans, lean beef, enriched cereals and spinach

**Protein** (builds, repairs and maintains body tissue and muscle)  
meat, beans, dairy

**Carbohydrates** (energy for growth) breads, cereals, rice, pasta and fruit

**Folic Acid** (tissue growth and cell function) spinach, broccoli, orange juice

**B Vitamins** (growth and energy)  
breads and grains



Here are some great, practical strategies for improving the nutrient content of your school meals:

**Get fresh and colorful** with vitamin C-rich fresh fruits. Cut kiwis in half and serve. Kids love scooping out the flesh with a spoon. Also try serving fresh strawberries when in season with a low fat yogurt dip.

**Boost the iron and fiber** in school meals by adding beans. Try hummus dip with fresh vegetables. Hummus, made with garbanzo beans, is a Middle Eastern dip that is growing in popularity. Check out the USDA recipe at [www.nfsmi.org/Information/school\\_recipes/E-24.pdf](http://www.nfsmi.org/Information/school_recipes/E-24.pdf). Also, try adding beans to your burritos, chili, quesadillas and soups.

When introducing new items like hummus dip or kiwi to students, remember that kids are more likely to try a new food if they know something about it first and have a positive opportunity to taste it. This is a great reason to coordinate your efforts with classroom teachers. The hummus dip would enhance lessons on the Middle East and kiwi originated in New Zealand.

# CALORIE RANGE

## New Requirements

School meals offered to each age/grade group must meet, on average over the school week, the minimum and maximum calorie levels specified in the following table:

Calorie ranges for breakfast		
Grades K–5 350–500	Grades 6–8 400–550	Grades 9–12 450–600
Calorie ranges for lunch		
Grades K–5 550–650	Grades 6–8 600–700	Grades 9–12 750–850

## Foundations

School meal requirements have focused on providing at least the minimum quantities of food for students who may not have regular access to good nutrition.

Students need enough food energy to grow and learn. USDA requires a minimum calorie level. This is very important for those free and reduced price meal eligible students who may rely on school meals for a large part of their calorie and nutrient needs. It is also important that schools do not overfeed students and so a maximum level has been established.

## What is a Calorie?

Calories are units of energy. Just like a car needs gas to run, the human body needs calories for energy. Calories come from three groups: carbohydrates, protein and fats.



## Using USDA Foods

USDA Foods only distributes canned fruits in light syrup or fruit juice to decrease calories from sugar. The fat content in the specifications for USDA ground beef products has decreased in recent years and now provides a leaner product with fewer calories per serving.

### Menu Tips

Sometimes schools struggle to meet the minimum calorie requirements while staying under the maximum fat requirements in meals. There are several steps to take to add calories and nutrients to meals without increasing the fat.

- Offer students additional servings of whole grain products and healthy side dishes to increase nutrients without large increases in total fat intake.
- Offer students fresh fruits for side dishes and desserts. Offer fresh vegetables as side dishes to increase nutrients and fiber. Limit the offering of added cheese, cream-based sauces, high-fat salad dressings and condiments.
- Plan daily menus to provide the calories needed each day to stay within the calorie range for the weekly average.
- Keep portion sizes age appropriate and consistent.

**AREA****NEW REQUIREMENTS**

Calorie Range	As a weekly average, SFAs shall offer meals that meet specific calorie ranges for each age and grade group.
Trans Fat & Saturated Fat	SFAs shall eliminate foods containing trans fats and reduce saturated fats to less than 10% of calories.
Whole Grains	One half of the grains served shall be whole grain or whole grain-rich until school year 2014–2015 when all grains must be whole grain or whole grain-rich.
Fruits	SFAs shall offer at a minimum, one fruit on all points of service for breakfast and lunch. When using frozen and canned fruits, SFAs shall use products that are packed in natural juice, water, or light syrup.
Vegetables	SFAs shall provide a variety of vegetables throughout the week, making sure dark green and red/orange vegetables are each offered at least one time per week.
Milk	SFAs shall offer only fat-free (skim) flavored or unflavored and low-fat (1%) milk at all meals. SFAs shall eliminate 2% and whole milk offerings.
Legumes	SFAs shall offer legumes (dry beans and peas) at least one time per week.
Sodium	SFAs shall reduce sodium 25–50% over a ten year implementation schedule.

**ADDITIONAL RECOMMENDATIONS**

Fiber	SFAs should offer meals with at least one gram of fiber per 100 calories.
Condiments	SFAs should not have salt or sugar dispensers or packets available. SFAs shall accurately reflect condiment usage in nutrient analysis and on production records. SFAs are encouraged to use low-fat condiments and/or control portions of high-fat condiments.
À la Carte	SFAs shall limit à la carte foods to those that meet the recommended nutritional guidelines for foods served in schools.

# WHOLE GRAINS

## New Requirements

School Food Authorities shall offer whole grain or whole grain-rich products for at least half of the required servings until school year 2014–2015 when all grains must be whole grain or whole grain-rich.

## Foundations

Grain foods supply carbohydrates for energy as well as vitamins B and E, folic acid and minerals such as iron, zinc and magnesium. Fiber is also an important part of whole grains. Schools should increase the amount and variety of whole grain products offered to students.

The consumption of whole grains is strongly encouraged in the 2010 Dietary Guidelines for Americans with the recommendation that at least half of the grains consumed each day should come from whole grains.

## Definition

### Whole grain rich:

- Products must contain at least 50 percent whole grains and the remaining grains in the product must be enriched.

### What are some examples of whole grain?

Enriched Wheat	Pot Barley
Bread	Pearled Barley
Durum Flour	Bran
Corn Flour	Rice
Grits	Couscous
Semolina	Multi-grain
Cornmeal	Stone-ground
De-germinated	Seven-grain
Cornmeal	



### Whole grain:

- Purchased foods: the whole grain must be listed first in the ingredients
- Homemade foods: more than 50 percent of the grains in the recipe must be whole grains.

Following is the official definition of whole grains, approved and endorsed by the Whole Grains Council in May 2004:

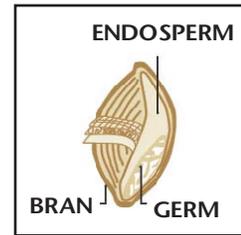
Whole grains or foods made from them contain all the essential parts and naturally occurring nutrients of the entire grain seed. If the grain has been processed (e.g., cracked, crushed, rolled, extruded, and/or cooked), the food product should deliver approximately the same rich balance of nutrients that are found in the original grain seed.

### Food names that may not be whole grains:

Buckwheat	Whole oats/oatmeal
Bulgur	Whole-grain cornmeal
Brown rice	Whole-grain corn
Popcorn	Whole-grain barley
Millet	Wild rice
Quinoa	Whole rye
Whole wheat	



Whole grains have the entire grain seed or kernel. The kernel has three parts: bran, germ, and endosperm.



## Using USDA Foods

Schools can order whole-wheat flour, brown rice, and whole-grain pastas (spaghetti and rotini) through the USDA Foods Program.

### SAMPLE

#### Whole Grain Ingredient Label

INGREDIENTS: WHOLE WHEAT FLOUR (WHOLE GRAIN), WATER, WHEAT GLUTEN, BROWN SUGAR, YEAST, RAISIN JUICE, CANOLA OIL (NON-HYDROGENATED) CULTURED WHEY, SALT, CONTAINS 2% OR LESS OF THE FOLLOWING: SODIUM ACID PYROPHOSPHATE, SODIUM BICARBONATE, VINEGAR, DOUGH CONDITIONERS (ETHOXYLATED MONO-DIGLYCERIDES, SODIUM STEAROYL LACTYLATE, DISTILLED MONOGLYCERIDE, CALCIUM PEROXIDE, ASCORBIC ACID, AZODICARBONAMIDE, ENZYMES), CALCIUM SULFATE, SOY FLOUR, CORN STARCH, YEAST NUTRIENTS (MONOCALCIUM PHOSPHATE). CONTAINS:

### Menu Tips

- Gradually add whole grains to your menus to allow time for students to get used to them.
- Provide taste tests of new whole-grain foods prior to serving them.
- Identify whole grains on your menu to let families know you are serving a whole-grain item. For example, instead of listing “roll” list “whole-wheat roll” on your menu. This will also encourage families to try whole-grain items at home.

## Recipe Ideas

- Introduce whole grains in popular products like pizza crust, breads and rolls, hamburger buns, pasta, breakfast foods, and mixed dishes, such as meatballs. For more variety, include some less common whole grains.
- Modify recipes to add more whole grains. For example, start with smaller amounts of whole-wheat flour in your favorite roll recipe and work up to more whole grains over time.
- Share successful recipes with other schools.

Find whole grain recipes at:

<http://www.wholegrainscouncil.org/recipes/school-recipes>

## Alaska Options

Alaska Grown grain options include barley and wheat.



# FRUITS

## New Requirements

School Food Authorities shall make an effort to provide a variety of fruits throughout the week making sure many choices are offered.

**Breakfast:** Beginning with school year 2014–15, School Food Authorities should offer one cup of fruit at all points of service for breakfast. 100% strength fruit juice may only count as 1/2 of the fruit component.

**Lunch:** Students must take a fruit or a vegetable as part of the reimbursable meal.

When using frozen and canned fruits, schools should use products in natural juice, water, or light syrup.

## Foundations

Fresh, frozen, canned, or dried fruits are the major sources of many vitamins and minerals, including Vitamin A and C, folate, and potassium. They also contain antioxidants, fiber, and other phytonutrients with health-promoting qualities.

One of the key recommendations in the 2010 Dietary Guidelines for Americans (DGAs) is to choose a variety of fruits



each day. Fruits offer different combinations of nutrients so consuming a variety of fruits is important for a well-balanced diet. Americans need to specifically increase their intake of orange fruits.

The DGAs recommend the consumption of whole fruits rather than juices to ensure adequate fiber intake.

## What are Orange Fruits?

Most children and adults need to eat more orange fruits that are usually higher in nutrients than lightly colored fruit. Orange fruits include: oranges, peaches, and apricots, although, there are many other kinds of orange fruits.

*Most children and adults need to eat more orange fruits that are usually higher in nutrients than lightly colored fruit.*



## Using USDA Foods

A variety of fruits are available in Alaska through the USDA Foods Program. The program offers fruits in many forms, including frozen, canned, and dried.

## Menu Tips

- Wild blueberries may be harvested and used in school meals for local flavor.
- Buy fresh fruits in season when they may be less expensive and at their peak flavor.
- Cut up fruits, especially apples and oranges, to make them easier to eat.
- Choose a variety of fruits with contrasting colors and shapes to catch students' attention



## Recipe Ideas

- Make a colorful salad by adding a variety of fruits
- For breakfast, top pancakes, French toast, or waffles with berries, apples, peaches, or pears.
- Add fruits to desserts such as a fruit cobbler or a fruit salad



## Alaska Options

*Alaska Grown* fruit options are primarily berries.

# VEGETABLES



## New Requirements

School Food Authorities shall provide a variety of vegetables throughout the week. Dark green, red/orange vegetables and legumes are each required once a week.

## What are Dark Green and Orange Vegetables?

The 2010 Dietary Guidelines for Americans say to vary your veggies. Most children and adults need to eat more dark-green and red/orange vegetables.

Dark-green vegetables include: broccoli, spinach, romaine lettuce, and other dark greens.

Red/Orange vegetables include: squash, carrots, sweet potatoes, red peppers, tomatoes, and pumpkins.

These vegetables contain higher amounts of Vitamin A than other vegetables.

Vegetables in the “other” sub-group include: cabbage, celery, cucumbers, onions, peppers, green beans, cauliflower, mushrooms and summer squash.

*Most children and adults need to eat more dark-green and red/orange vegetables.*

## Foundations

Fresh, frozen, canned, or dried vegetables are the major sources of many vitamins and minerals, including Vitamin A and C, folic acid, and potassium. They also contain antioxidants, fiber and other phytonutrients similar to fruits. Dark-green leafy vegetables, such as spinach or broccoli, and dark orange vegetables, such as carrots or yams, have the highest levels of these nutrients.

School Food Authorities should increase the availability and variety of vegetables at all meals. One of the key recommendations in the 2010 Dietary Guidelines for Americans (DGAs) is to choose a variety of vegetables each day.

Vegetables offer different combinations of nutrients. Consuming a variety of vegetables is important for a well-balanced diet. Vegetables from each of the subgroups: dark green, red/orange, and legumes, must be offered every week. The DGAs recommend the consumption of whole vegetables rather than juices to ensure adequate fiber intake. Fiber is good for digestion, elimination and a healthy digestive system.



## Using USDA Foods

A variety of vegetables including frozen and canned are offered through the USDA Foods Program in Alaska.

## Menu Tips

- Buy fresh vegetables in season when they may be less expensive and at their peak flavor.
- Choose a variety of vegetables with contrasting colors and shapes to catch students' attention.
- Cut up vegetables to make them easier to eat.
- Make a colorful salad by adding a variety of vegetables.
- Offer a seasoning shaker to add fun and flavor to vegetables instead of less healthy condiments. Dill, Italian seasoning, chili powder or cinnamon add flavor without fat, salt or sugar.
- Find recipes that contain vegetables as a main ingredient to increase vitamins and fiber in your menu.



## Alaska Options

Alaska Grown vegetable options include carrots, potatoes, cabbage, lettuce, squash, zucchini, peas, beets, rutabaga, kohlrabi, and tomatoes.

*Fresh, frozen, canned, or dried vegetables are the major sources of many vitamins and minerals, including Vitamin A and C, folic acid, and potassium.*

# LEGUMES

## New Requirements

School Food Authorities shall offer legumes (dry beans and peas) one time per week.

## Foundations

Legumes (dry beans and peas) are an inexpensive food that can make school meals more nutritious. Legumes are an excellent source of plant protein and dietary fiber, and provide nutrients such as iron, potassium, folate, and zinc. They are also naturally low in fat and sodium. The 2010 Dietary Guidelines for Americans recommend eating three cups of beans per week.

## What is a Legume?

Legumes are plants that have pods with rows of seeds inside. Legumes include dry beans, peas, and lentils. Legumes are nutritious and flavorful. They are very versatile and can be incorporated into a variety of dishes. Legumes come in fresh, frozen, canned and dry forms.

*Legumes are an excellent source of plant protein and dietary fiber, and provide nutrients such as iron, potassium, folate, and zinc.*

## Examples of Legumes

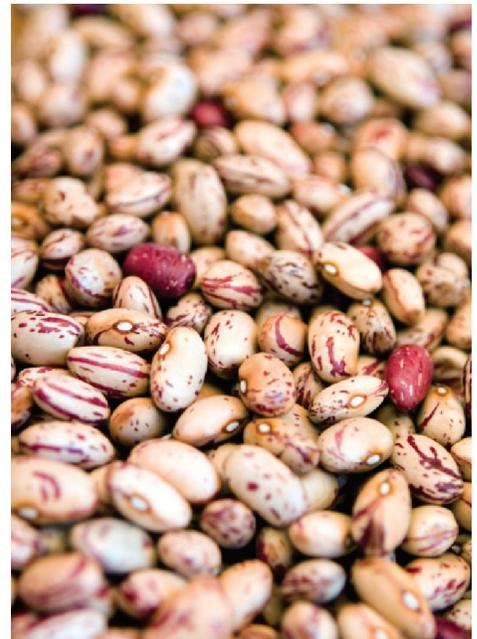
pinto beans	black-eyed peas
kidney beans	garbanzo beans
black beans	(chickpeas)
lentils	great northern
split peas	beans
navy beans	

Only a few types, such as green beans, string beans, yellow beans, wax beans, green peas, baby green lima beans and fresh soybeans (edamame) are not considered dry beans.



## Using USDA Foods

The USDA Foods Program offers canned, low-sodium, pre-cooked dry beans and peas.



### Menu Tips

- Add legumes to all kinds of dishes to increase the amount of fiber in meals.
- Beans can be served as a side dish, a potato topping, or in pasta sauce.
- Make canned dry beans and peas an everyday choice on your salad bar.
- Add canned dry beans to your chef salad.
- Serve baked beans with sandwiches and hamburgers.
- Complete your Mexican-themed menus by offering pinto beans, black beans or fat-free refried beans.

*The 2010 Dietary Guidelines for Americans recommend eating three cups of beans per week.*



### Recipe Ideas

- Add beans and other vegetables to soups. A variety of beans are good in soups including garbanzo, kidney, black, and pinto.
- Add pinto or black beans to tacos and burritos.
- Top salads with beans or make a bean salad using three, four or five different beans.
- Use legumes as a meat substitute to reduce food costs and provide a vegetarian meal. Here are some examples: add kidney beans to chili, lentils in meatloaf, pinto beans in enchiladas, black beans in chunky soup, mashed kidney or pinto beans in meatballs, soybeans in casseroles and white beans in stews.
- Add canned dry beans and peas to casseroles, stews, soups and side dishes like rice pilaf.

# MILK

## New Requirements

School Food Authorities shall offer only fat-free (skim, either flavored or unflavored) and unflavored low-fat (1%) milk at all points of service.

## Foundations

Milk consumption has been associated with overall diet quality and adequate intake of many nutrients. USDA requires that School Food Authorities offer a daily variety of milk fat.

Milk group foods are good sources of protein, calcium, riboflavin, phosphorus, potassium, vitamin A, and vitamin D.

The intake of milk products is especially important to bone health during childhood and adolescence. The 2010 Dietary Guidelines for Americans (DGAs) recommend consuming fat-free and low-fat milk and milk products on a daily basis, with a key recommendation to consume three cups per day of fat-free or low-fat milk. Children two to eight years old should consume two cups per day of fat-free or low-fat milk.

*The intake of milk products is especially important to bone health during childhood and adolescence.*



## Serving Reconstituted Milk in Alaska

According to regulation, in Alaska where it is difficult to get fresh milk on a regular basis, schools are allowed to serve reconstituted powdered milk. This milk must be made according to the instructions to be part of a reimbursable meal. Mixing this milk well ahead of the meal service and serving it at refrigerator temperature will make it more acceptable to the students.

## What is Low-Fat Milk?

The DGAs recommend consuming low fat or fat-free milk. One-percent milk is considered low-fat milk and skim milk is fat-free milk. Low-fat and skim milks offer as much (and sometimes more) calcium, protein, phosphorus, and Vitamin D as higher-fat milks, but they are lower in fat, saturated fat, and cholesterol.



## Using USDA Foods

USDA Foods offers Ultra-high Temperature Processed (UHT) milk, which is shelf stable. Ultra-high processing is the sterilization of food by heating it for an extremely short period.

## Menu Tips

- Consider offering milk in new packaging. Students drink more milk when it's offered in "cool" packages. School milk is available in 1% white, skim white or flavored skim.
- Offering a variety of 1% and skim milk flavors will encourage students to drink more milk.
- Make sure to keep your milk cold. Milk served at the correct temperatures is more appetizing to everyone.

## Recipe Ideas

- Adjust recipes, use low-fat milk products in cooking and baking to help reduce the amount of fat, saturated fat, and cholesterol in foods.
- Milk recipes used in nutrient analysis should accurately reflect the milk served every day.
- Only milk served fluid is creditable in the National School Lunch Program and School Breakfast Program.

## Alaska Option

Milk is a local option for Alaska.

*Milk consumption has been associated with overall diet quality and adequate intake of many nutrients.*



## Milk Comparison

8 oz milk	Calories	Calcium (mg)	Fat (g)	Sat. Fat (g)
Fat-free (skim)	90	300	<.5	<.5
Fat-Free chocolate	140	400	<.5	<.5
1% (low-fat)	120	350	2.5	1.5

# MEAT AND MEAT ALTERNATES

## Current Requirements

- The serving of meat/meat alternate may be contained only in the main dish plus one other menu item.
- Dry beans and peas may count as a vegetable or as a meat alternate, but not as both in the same meal.

## Foundations

The meat group supplies nutrients, including protein, zinc, iron, and B vitamins (thiamine, niacin, vitamin B6, and vitamin B12.)

Meat sources of these nutrients, such as beef, poultry, and fish are some of the best sources of iron. The iron from these foods is better absorbed by the body than the iron in plant foods

## The 2010 Dietary Guidelines for Americans recommend:

- Choose a variety of protein foods, which include seafood, lean meat and poultry, eggs, beans and peas, soy products, and unsalted nuts and seeds.
- Increase the amount and variety of seafood consumed by choosing seafood in place of some meat and poultry.

### Menu Tips

- When writing menus, watch the fat content of the meat/meat alternate products.
- Choose a variety of meat/meat alternates over the course of the week: chicken, fish, beef, pork, soy products, nuts/seeds, and legumes are all acceptable.

Because of their high nutrient content, beans and peas may be considered as a vegetable and as a protein food.

Dried beans and dried peas are excellent sources of protein. They also provide other nutrients, such as iron and zinc, similar to seafood, meat, and poultry. They are excellent sources of dietary fiber and nutrients such as potassium and folic acid, which also are found in other vegetables.

## How do we choose lean meats?

Choose meat cuts that are low in fat and ground beef that is extra lean (at least 90 percent lean). Trim fat from meat and remove poultry skin before cooking or eating. Try grilling, broiling, poaching, or roasting. These cooking methods do not add extra fat. Drain fat from all meats after cooking. While added trans fats are no longer permitted in school meals, naturally occurring trans fats in meat/meat alternates are acceptable.



## Using USDA Foods

The USDA Foods Program offers a wide variety of lean meats for schools such as chicken fajita strips, ground beef, turkey, and reduced-fat cheese.

## Alaska Options

Alaskan options include moose, venison, bison, salmon, pollock, and cod.

# TRANS FAT AND SATURATED FAT

## New Requirements

School Food Authorities shall eliminate foods containing added trans fat and reduce saturated fat to less than 10 percent of total calories.

## Foundations

The 2010 Dietary Guidelines for Americans recommend limiting the intake of fats and oils high in saturated and/or trans fatty acids. A high intake of trans fat may increase the risk of coronary heart disease.

## What are Trans Fats

Trans fat is formed when during the process of turning an oil into a solid or semi-solid fat. The process is called hydrogenation and is made known in the ingredient statement on the label as hydrogenated oil or partially hydrogenated oil.

Processed foods and oils provide about 80 percent of trans fat in the diet, compared to about 20 percent that occurs naturally in food from animal sources. Major sources of trans fats in the Amer-

ican diet are cakes, cookies, crackers, pies, breads, animal products, margarine, fried potatoes, shortening and other highly processed foods.

## LABEL READING

Check the Nutrition Facts label and avoid foods with “partially hydrogenated oils” listed as one of the primary ingredients because this is a sign that the food contains trans fats.

In 2006, trans fats were required to be listed on Nutrition Facts labels.

## What is Saturated Fat?

Saturated fats have a chemical makeup in which the carbon atoms are saturated with hydrogen atoms. Saturated fats are usually solid at room temperature.

Saturated fats are found mostly in animal sources such as meat and dairy products. Some baked foods also contain saturated fat from the use of oils, shortening, margarine and butter.

## Menu Tips

- Compare similar products by the Nutrition Facts label and choose the food with no trans fat.
- Talk with food vendors and make product comparisons.
- Write specifications for food purchases with no trans fats and limited saturated fats.
- Offer fruits and vegetables.
- Be aware that á la carte items may be high in trans fats and saturated fats.
- Find healthy alternatives to fats and oils.



## Using USDA Foods

USDA Foods eliminated trans fats from all products.

# SODIUM



## New Requirements

School Food Authorities will reduce sodium by approximately 25–50 percent in breakfasts and lunches over a 10-year period.

## Foundations

The 2010 Dietary Guidelines for Americans (DGAs) recommend consuming less than 2,300 mg of sodium (approximately 1 teaspoon of salt) per day. Many students eat nearly double the daily recommended amount.

School Food Authorities should begin reducing sodium incrementally with a long-term plan for meeting the DGAs' recommendation.

Nearly all Americans consume more sodium than they need. A taste for salt is a learned habit. Reducing dietary sodium can lower blood pressure, which reduc-

es the risk of heart disease, stroke, and kidney disease. By gradually reducing the salt and sodium in school meals, students' tastes can change.

## What is Sodium?

Salt is sodium chloride. Food labels list sodium rather than salt content. Processed foods are high in sodium, contributing 75 percent of sodium to the American diet. Table salt is not the only source of sodium. Keep an eye out for other ingredients that contain sodium such as monosodium glutamate (MSG), baking soda, baking powder, disodium phosphate, sodium alginate, and sodium nitrate or nitrite.

*Many students eat nearly double the daily recommended amount of salt.*

### Menu Tips

- Cut back on high sodium foods gradually to give students' taste buds time to adjust.
- Introduce lower sodium versions of popular menu items and recipes at the beginning of a school year.
- Serve more fresh foods and fewer processed foods. Processed foods, such as canned vegetables, soups, luncheon meats, and frozen entrees, are often high in sodium.
- Be aware of the sodium content of condiments. Some condiments, such as soy sauce and ketchup, can be high in sodium.
- Talk to food vendors and make product comparisons. Order lower sodium versions when purchasing popular processed foods.



## Using USDA Foods

USDA Foods Program offers only low-sodium, canned vegetables. Schools may also order frozen vegetables as a lower sodium option. USDA Foods has also reduced the sodium limit on mozzarella, processed and blended cheeses.

## Recipe Ideas

- Offer high-sodium foods less often. Go easy on pre-prepared, processed entrees and side dishes, such as pizza, chicken nuggets, and hot dogs. Use grilled chicken breast instead of luncheon meat, bacon, sausage, or ham.
- Modify recipes that use high-sodium ingredients such as cheese sauces, canned soups, tomato sauce, paste, or spaghetti sauce, canned vegetables, chips, and taco shells. Use lower sodium versions or use less of these items. Remove salt from recipes whenever possible. (Note: Do not leave salt out when preparing baked goods because it could affect the baking process.)
- Find recipes that use fresh or dried herbs, spices, lemon or orange zest, or fruit juices to intensify flavors in foods without adding sodium.

# Water

## New Requirements

Water must be made available to all students during the meal service.

Other beverages such as flavored waters may be considered foods of minimal nutritional value and, if so, are not allowed to be served during meal times in competition with other more nutritious beverages.

*Water should be available as an extra beverage, but is not to take the place of milk or fruit juice, which provides nutrients.*

## Foundations

The 2010 Dietary Guidelines for Americans recommend choosing and preparing foods and beverages with little added sugar or calorie sweeteners.

Milk, 100% fruit juice and water are all beverages that meet these dietary guidelines.



# SUGAR



## Recommendations

The 2010 Dietary Guidelines for Americans recommend choosing and preparing foods and beverages with little added sugar or calorie sweeteners. Balancing food energy intake with energy output is consistent with maintaining healthy weight. Limiting foods high in added sugars is recommended because of sugar's association with increased calorie consumption and decreased intake of nutrients. Schools should make an effort to serve nutrient-dense foods to increase the nutritional content of meals. High-sugar foods or foods with sugar as the primary ingredient should be replaced with more nutritious options.

### Menu Tips

- Serve cereals that have less than 10 grams of sugar per ounce at breakfast. Check in your copy of Bowes and Church's Food Values of Portions Commonly Used for cereals that fit this criterion.
- Include hot-cooked cereal often because it is high in fiber and low in sugar.
- Try to eliminate breakfast pastries, doughnuts, and toaster pastries.
- Only use canned fruits packed in light syrup, natural juices, or water.
- Eliminate dessert items that have sugar as a primary ingredient.

*Balancing food energy intake with energy output is consistent with maintaining healthy weight.*

## What is Sugar?

Sugar is a simple carbohydrate found in a variety of foods that converts quickly into glucose. If intake of glucose is higher than what the body can use or store, then it is converted to fat. High-sugar foods often contain empty calories—they provide a lot of calories without many other nutrients or micro-nutrients.



## Using USDA Foods

Canned fruits from USDA Foods are packaged in light syrup, water, or natural juices. USDA has not purchased fruit in heavy syrup in over 20 years.

## Recipe Ideas

- When reducing the amount of sugar in quick breads, cakes and cookies, use fruits, such as raisins, dried apricots, dates or bananas instead because they add sweetness naturally. Fruit juices and frozen fruit juice concentrates may be used to sweeten baked goods as well.
- There are many seasonings that offer the perception of sweetness that can be used when sugar is reduced: all-spice, cardamom, cinnamon, ginger, mace, nutmeg, and citrus juices.
- Use fruit toppings on breakfast foods such as cereal, oatmeal, pancakes, and waffles instead of sugar or syrup.

## Recommendations

School Food Authorities should offer meals with at least one gram of fiber per 100 calories.

## Foundations

Most Americans eat only half of the recommended amount of dietary fiber each day. The 2010 Dietary Guidelines for Americans (DGAs) recommend dietary fiber intake at 14 grams per 1,000 calories, or 1.4 grams per 100 calories. The fiber nutrition requirement is helping schools work toward the DGAs recommendation.

## What is Fiber?

Fiber is that part of plant food that is indigestible by humans. Fiber aids in digestion, promotes health and offers protection from some diseases.

Fiber, also known as nature's scrub brush, is a key nutrient in maintaining health. Unlike other food components, fiber passes through the digestive system without being broken down and absorbed into the bloodstream. Besides helping the digestive system process foods, fiber helps to prevent diseases such as cancer, heart disease, high cholesterol, and diabetes.

Fiber comes from plant sources of foods including fruits, vegetables, legumes, grains, nuts, and seeds. The DGAs recommend that most fruits and vegetables should be consumed in whole forms, which are better sources of fiber than fruit and vegetable juices.

The amount of fiber varies among different varieties of foods. The list below provides some examples of high-fiber foods:

- 1/2 cup beans: 5–9 grams fiber
- 1/2 cup lentils: 7.8 grams fiber
- 1/2 cup green peas: 4.4 grams fiber
- 1 cup canned peas: 4 grams fiber
- medium baked potato: 3.8 grams fiber
- medium apple: 3.3 grams fiber
- medium orange: 3.1 grams fiber



## Using USDA Foods

USDA Foods offers a variety of fiber-rich foods like canned dry beans (including pinto, refried and kidney beans), whole grains, and canned, fresh, or frozen fruits and vegetables.

## Recipe Ideas

- Substitute just over half of the flour in your menus for whole wheat flour.
- Make whole-wheat rolls to use for hoagie buns, or substitute whole-wheat pasta in your spaghetti recipe.
- Add some barley or beans into your vegetable soups.
- Go onto the USDA Foods web site for some ideas for commodity recipes at [www.fns.usda.gov/fdd/recipes/byfdgrps.htm](http://www.fns.usda.gov/fdd/recipes/byfdgrps.htm)

# FIBER



## Menu Tips

- Compare the Nutrition Facts label of foods and choose foods higher in fiber.
- Add whole grains to the menu including tortillas, breads, cereals, buns, bagels, crackers, and pasta.
- Serve brown rice or a mixture of half brown rice and half white rice.
- Serve more fruits, vegetables, and legumes.
- Breakfast is a good time to serve fiber-rich foods such as oatmeal, whole wheat muffins, whole wheat waffles, whole-wheat pancakes, and fiber-rich cereals and bars.
- Provide hummus as a dip for vegetables.

## Recommendations

To limit excessive intake of high-sodium or high-sugar condiments, schools should limit shakers or packets available.

# CONDIMENTS

School food service should accurately reflect condiment usage in nutrient analysis and on production records and are encouraged to use low-fat condiments and control portions of high-fat condiments.

## What are Condiments?

Condiments are any flavor-enhancing food items such as ketchup, ranch dressing, soy sauce, salt, sugar, or pepper.

### Menu Tips

- Most students love condiments, and they love to dip foods. Using condiments as a tool to get students to try new foods can be a good idea, if used in moderation.
- Lighten up on added fats like butter, margarine, oil, salad dressings, and mayonnaise by controlling portions, serving smaller portions, or using low-fat varieties.
- Condiments can also be high in sodium. Look for soy sauce, teriyaki sauce, chili sauce, and marinades that are reduced sodium.
- Sometimes making the meal healthier is as simple as removing the condiments.
- Remove all salt shakers and sugar dispensers from the cafeteria.

## Foundations

Condiments can add a significant amount of fat, saturated fat, sodium, and sugar to the healthy meals that are served.

Self-serve condiments can have a negative impact on the nutrient content of the meal and can be difficult to accurately analyze.

## Recipe Ideas

- Buy dry blends and mix your own salad dressing to control the amount and type of oil and milk you add. Often you can use less oil and more vinegar, water or flavorful liquid than the directions listed on the package.
- Pre-mix the dressing in your salads to help control the amount.

*Condiments are any flavor-enhancing food items such as ketchup, ranch dressing, soy sauce, salt, sugar, or pepper.*

# Á LA CARTE

## New Requirements

School Food Authorities shall limit á la carte foods that do not meet the Nutrition Requirements for School Meals.

- Strive to eliminate foods containing trans fats
- Strive to eliminate pre-fried foods
- Offer whole grains, fruits and vegetables
- Offer low-fat milk choices (1% and skim)
- Offer foods low in sugar, sodium and cholesterol
- Offer foods high in fiber
- Control portions of high-fat condiments or use low-fat condiments

## Foundations

Schools should limit unhealthy á la carte foods to maximize participation in the school meals programs and encourage consumption of balanced, nutritious meals.

Children consume between 19% and 50% of their total calories at school. School meals are required to provide healthful foods and beverages, these guidelines should be followed with the á la carte offerings as well.

The Institute of Medicine recommends that the federally reimbursable school nutrition programs be the primary source of foods and beverages offered at a school.

## Tips

- Don't compete with school meals programs by offering less nutritious á la carte foods.
- Use your district's wellness policy to set requirements for all competitive foods on campus.
- Follow the basic Dietary Guidelines for Americans recommendation when choosing á la carte foods by providing whole grains, fruits, vegetables, and low-fat dairy products.
- Offer healthy items at a lower cost than other items.
- Read the Nutrition Facts labels and choose items that fit the new nutrition requirements.
- Teach students appropriate portion sizes by offering á la carte items in appropriate serving sizes. Á la carte serving sizes should not be larger than those in school meals.
- Make a shaker salad for student to purchase á la carte with a small amount of pre-portioned low-fat salad dressing.
- Make cut up veggies and low-fat dip available.
- Offer a single serving of prepackaged nuts for a healthful protein boost.

# SAMPLE MENUS

## Sample Breakfast Menu (K-12)

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Whole-Wheat*	Oatmeal*	Cheerios*	Breakfast Sandwich	Bagel
Breakfast Burrito	Raisins	Orange Juice	Pears	Cream Cheese
Salsa	Whole-Wheat Toast	1/2 Banana	Milk	Strawberry and Bananas
Orange Halves	Peaches	Milk		Yogurt
Milk	Milk			Milk

\* Denotes a whole-grain food item.

Skim milk (white or flavored) and unflavored 1% white must be offered

## Sample Lunch Menu (K-6)

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Beef and Broccoli Brown Rice Bowl*	Whole-Grain Spaghetti w/ Meat Sauce*	Chicken Fajitas w/Whole-Grain Tortillas*	Whole-Grain Pizza*	Whole-Wheat Turkey Sandwich*
Peaches	Whole-Wheat Roll*	Low-Fat Refried Beans	Romaine Salad Mix	Broccoli/Cauliflower
Carrot Sticks	Romaine Salad Mix	Spanish Rice*	Pineapple Chunks	Low-Fat Ranch Dressing
Low-Fat Ranch Dressing	Pears	Grapes	Whole-Grain Rocket Bar*	Bananas
Milk	Milk	Corn	Milk	Low-Fat Chocolate Pudding
		Milk		Milk

\* Denotes a whole grain food item.

Skim milk (white or flavored) and unflavored 1% white must be offered

# QUESTIONS AND ANSWERS

## **Calorie Range**

If we have a childhood obesity problem, why don't the calorie requirements recommend that schools serve calories below 100%?

Serving a meal with less than 100% of the minimum calories would be less restrictive than the USDA Requirements. A State agency cannot make requirements that are less restrictive than the USDA Requirements. The majority of students participating in School Meal Programs come from food-insecure households, therefore meeting their minimum calorie requirements is important.

## **Trans Fat**

What are natural trans fats? Are these okay in school meals?

A small amount of trans fat is found naturally in some animal-based foods such as beef, lamb, and dairy foods. It isn't clear if these naturally occurring trans fats have the same negative effects on the body as trans fats that have been industrially manufactured. According to the FDA, completely eliminating trans fat from the diet is not practical because it is unavoidable in ordinary diets. For this reason the trans fat requirements do not apply to naturally occurring trans fats.

## **Whole Grains**

Will schools have to bake everything from scratch to meet the whole-grain standard?

No. Some schools choose to make their whole-grain baked products from scratch, while some choose to purchase some of their whole-grain products. The food industry has recently increased the availability of

whole-grain foods due to the whole-grain recommendations in the 2010 Dietary Guidelines for Americans and customer demands. There are many whole-grain products available to purchase including whole-grain noodles, whole grain rice (brown rice), whole-wheat bread sticks, whole-wheat hoagie buns, and whole-wheat pizza crust. Remember to always read the Nutrition Facts label ingredient list to determine if a product is a true whole grain. Some sales reps may think their product is a whole grain when in fact it may not be.

## **Fruits and Vegetables**

What does "variety" mean in the fruit and vegetable requirements?

Variety means serving fruits and vegetables from the different color categories and in different forms throughout the week. It is important that schools do not serve the same fruits and vegetables each day. Different fruits and vegetables contain different nutrients so it is important to serve a variety. The HealthierUS Challenge requires schools to serve at least one different fruit and at least one different vegetable every day of the week as well as three dark green or orange vegetables per week. This would be a good goal for a school to work toward.

## **Juice**

Why limit juice?

Fruit juice is often low in fiber compared to whole fruits. Often the fiber in fruit comes from its peel and/or pulp, which are usually removed in juices. The Dietary Guidelines for Americans recommend that whole fruit rather than fruit juice is consumed to meet the fruit recommendation to ensure

**QUESTIONS  
AND  
ANSWERS  
cont.**

adequate fiber intake. The American Academy of Pediatrics also recommends that juice intake be limited because of concerns about excess juice consumption leading to excess energy intake, as well as displacing other more nutrient-dense foods.

**Milk**

Can schools serve flavored milk under the new nutrition Requirements?

Yes, nonfat/skim milk may be flavored. Other milk fats may not. Studies show that offering students flavored milk can help increase consumption of the nutritionally dense beverage.

**Legumes**

What are dry beans? Do they have to be dry?

Dry beans do not mean that the bean needs to be purchased in its dry form. Dry beans include canned, pre-cooked beans or dry packaged beans that originated as dry beans before they were processed.

**Fiber**

How do you add fiber to breakfast?

Serving more whole grain foods and fruits at breakfast will help increase fiber.

**Condiments**

What does “control portions” mean in the condiment recommendations?

Condiments can be high in fat, saturated fat, and sodium. Portions of condiments can be controlled in many ways.

Below are some ideas for controlling portions:

- Control portions by providing correct serving utensils (1 oz ladle)
- Use pumps that are set at 1 oz
- Use portion packets
- Pre-portion condiments
- Pre-mix salad dressing in the salads ( a salad recipe can be found on the Nutrition Requirements website)

Schools should not have high fat or sodium condiments available in self-serve containers that are high flowing and encourage large portions.

## **Contacts**

Alaska National School Lunch Program  
907-465-8709

Alaska Farm to School Program  
907-328-1950

## **References**

The following resources were used in the development of Nutrition Foundations for Alaska School Meals:

Idaho State Department of Education, Child Nutrition Programs, *New Nutrition Standards for Idaho School Meals*

Dietary Guidelines of the United States. 2011.

Nutrition Standards in the National School Lunch and School Breakfast Programs

Pictures: Microsoft.com clip art gallery and USDA/FNS

For lists of local farms and local products please see:  
[http://dnr.alaska.gov/ag/ag\\_AKGrownResourceBook.htm](http://dnr.alaska.gov/ag/ag_AKGrownResourceBook.htm)



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